AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A silicon controlled rectifier comprising:

a semiconductor region having:

a buried layer having a first conductivity type and a dopant concentration;

a first region having a second conductivity type and a dopant concentration;

a second region of the first conductivity type that contacts the buried layer and the first region, the second region having a dopant concentration that is less than the dopant concentration of the buried layer;

a third region of the second conductivity type that contacts the second region, the third region contacting a top surface of the second region, the first and the third regions being spaced apart; and

a fourth region of the first conductivity type that contacts the second region, the fourth region contacting the top surface of the second region and being spaced apart from the third region.

2. (Original) The rectifier of claim 1 and further comprising a fifth region of the second conductivity type formed in the second region, the fifth region contacting the top surface of the second region, the fourth region lying between the third and fifth regions.

3. (Original) The rectifier of claim 2 wherein the fifth region contacts the first region.

4. (Original) The rectifier of claim 2 wherein the fifth region is spaced apart from the buried layer.

5. (Cancelled)

6. (Original) The rectifier of claim 2 wherein the first region lies vertically below the fifth region.

7. (Original) The rectifier of claim 2 wherein the fourth region is spaced apart from the buried layer.

8. (Currently Amended) A silicon controlled rectifier comprising:

a semiconductor region having:

a buried layer having a first conductivity type and a dopant concentration;

a first region having a second conductivity type and a dopant concentration; ~~and~~

a second region of the first conductivity type that contacts the buried layer and the first region, the second region having a dopant concentration that is less than the dopant concentration of the buried layer;

a third region of the second conductivity type that contacts the second region, the third region contacting the top surface of the second region;

a fourth region of the first conductivity type that contacts the second region, the fourth region contacting the top surface of the second region and being spaced apart from the third region;

a first conductive region that contacts the third region; and

a second conductive region that contacts the third region, the second conductive region being spaced apart from the first conductive region.

9. (Original) The rectifier of claim 8 wherein the first conductive region has the first conductivity type, and the second conductive region has the second conductivity type.

10. (Original) The rectifier of claim 9 wherein the first and second conductive regions are electrically connected together.

11. (Original) The rectifier of claim 8 and further comprising a third conductive region that contacts the fourth and fifth regions.

12. (Original) The rectifier of claim 11 wherein the third conductive region is spaced apart from the first and second conductive regions.

13. (Original) The rectifier of claim 11 and further comprising:

a layer of isolation material formed over the second region;

a first contact formed through the layer of isolation material to make an electrical connection with the first conductive region;

a second contact formed through the layer of isolation material to make an electrical connection with the second conductive region; and

a third contact formed through the layer of isolation material to make an electrical connection with the third conductive region.

Claims 14-20 (Cancelled)

21. (Previously Presented) The rectifier of claim 1 wherein the third region includes all contiguous regions of the second conductivity type.

22. (Previously Presented) A silicon controlled rectifier comprising:

a first semiconductor region of a first conductivity type, the first semiconductor region having a dopant concentration;

a buried region of the first conductivity type, the buried region contacting the first semiconductor region and having a dopant concentration that is greater than the dopant concentration of the first semiconductor region;

a second semiconductor region of a second conductivity type that contacts the first semiconductor region, the second semiconductor region being spaced apart from the buried region, the second semiconductor region including all contiguous regions of the second conductivity type; and

a third semiconductor region of the first conductivity type that contacts the first semiconductor region, the third semiconductor region being spaced apart from the buried region and the second semiconductor region, and having a dopant concentration that is greater than the dopant concentration of the first semiconductor region.

23. (Currently Amended) ~~The silicon controlled rectifier of claim 22 and further comprising~~ A silicon controlled rectifier comprising:

a first semiconductor region of a first conductivity type, the first semiconductor region having a dopant concentration;

a buried region of the first conductivity type, the buried region contacting the first semiconductor region and having a dopant concentration that is greater than the dopant concentration of the first semiconductor region;

a second semiconductor region of a second conductivity type that contacts the first semiconductor region, the second semiconductor region being spaced apart from the buried region, the second semiconductor region including all contiguous regions of the second conductivity type;

a third semiconductor region of the first conductivity type that contacts the first semiconductor region, the third semiconductor region being spaced apart from the buried region and the second semiconductor region, and having a dopant concentration that is greater than the dopant concentration of the first semiconductor region; and

a fourth semiconductor region of the second conductivity type that contacts the first semiconductor region, the buried region, and the third semiconductor region.

24. (Previously Presented) The silicon controlled rectifier of claim 23 wherein the fourth semiconductor region includes:

a first dopant concentration region;

a second dopant concentration region that contacts the first dopant concentration region, the second dopant concentration region having a concentration less than the first dopant concentration region;

a third dopant concentration region that contacts the second dopant concentration region, the third dopant concentration region having a concentration less than the second dopant concentration region, the second dopant concentration region lying between the first dopant concentration region and the third dopant concentration region; and

a fourth dopant concentration region that contacts the third dopant concentration region, the fourth dopant concentration region having a concentration greater than the third dopant concentration region, the third dopant concentration region lying between the second dopant concentration region and the fourth dopant concentration region.

25. (Previously Presented) The silicon controlled rectifier of claim 24 wherein a dopant region of the fourth semiconductor region lies laterally adjacent to the buried region.

26. (Previously Presented) The silicon controlled rectifier of claim 25 wherein the dopant region has a dopant concentration substantially equal to the first dopant concentration region.

27. (Previously Presented) The silicon controlled rectifier of claim 23 wherein the second semiconductor region is spaced apart from the fourth semiconductor region.

28. (Previously Presented) The silicon controlled rectifier of claim 23 wherein the third doped semiconductor region includes:

a first dopant concentration region; and

a second dopant concentration region that contacts the first dopant concentration region, the second dopant concentration region having a concentration less than the first dopant concentration region.